

# Low Voltage DC Applications



## Product Enhancement:

General Duty Safety Switch certification for use on low voltage ( $\leq 60\text{V}$ ) DC circuits.

## Information & Application:

Tables 1 and 2, on the back, list the standard General Duty Safety Switch catalog numbers that are now certified for use on DC systems. These UL98 listed switches are self-certified for DC applications not to exceed 60VDC.

Certified as DC disconnects, these products can be used in data-centers, telecom, wind, and other segments that have applications for switching 60VDC, 48VDC and lower DC voltages.

## Advantages:

The UL98 Standard has 125v, 250v and 600v DC voltages in the test scenario. Unlike their Heavy Duty counterparts, General Duty switches typically do not carry any DC voltage ratings. Thus, more expensive Heavy Duty devices must be utilized, and at the lower voltages those devices are over-specified. For the lower voltages, General Duty devices are more than sufficient to interrupt the circuit. Eaton has subjected the catalog numbers in tables 1 and 2 to the same tests as required by UL, but at a 60vDC level, and are pleased to self-certify these devices at that rating. However, since there is no UL listing at this voltage, this is not a listed application.

Applied as Charge Controller, Battery Isolation or other applicable disconnect, these devices, unlike other products that require a minimum voltage to operate, have a voltage capability from 1VDC to 60VDC.

The switch line terminals can be positive (+) or negative (-) polarity to ground.

Additionally, these products are fully enclosed and have a blade-into-stationary-contact design that allows for visible verification of the switch status, providing a safer alternative.

**Notes:** When applied in DC systems, appropriate DC fusing must be used (for fusible devices).

The internal product labels do not have a notation advising of this self-certified rating - this technical bulletin can be used to document.

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## Low Voltage DC Rated General Duty Safety Switches

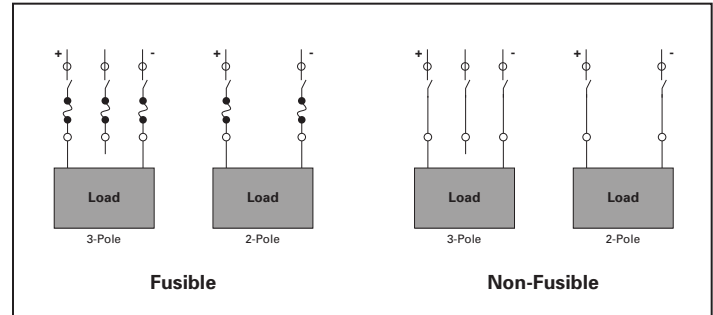
Table 1.

USA					
	Ampere Rating	Nema 1		Nema 3R	
		2-Pole	3-Pole	2-Pole	3-Pole
Non-Fusible	30 Amp	DG221UGB	DG321UGB	DG221URB	DG321URB
	60 Amp	DG222UGB	DG322UGB	DG222URB	DG322URB
	100 Amp	DG223UGB	DG323UGB	DG223URB	DG323URB
Fusible	30 Amp	DG221NGB	DG321NGB	DG221NRB	DG321NRB
	60 Amp	DG222NGB	DG322NGB	DG222NRB	DG322NRB
	100 Amp	DG223NGB	DG323NGB	DG223NRB	DG323NRB

Table 2.

CANADA					
	Ampere Rating	Nema 1		Nema 3R	
		2-Pole	3-Pole	2-Pole	3-Pole
Non-Fusible	30 Amp	CDG221UGB	CDG321UGB	CDG221URB	CDG321URB
	60 Amp	CDG222UGB	CDG322UGB	CDG222URB	CDG322URB
	100 Amp	CDG223UGB	CDG323UGB	CDG223URB	CDG323URB
Fusible	30 Amp	CDG221NGB	CDG321NGB	CDG221NRB	CDG321NRB
	60 Amp	CDG222NGB	CDG322NGB	CDG222NRB	CDG322NRB
	100 Amp	CDG223NGB	CDG323NGB	CDG223NRB	CDG323NRB

Figure 1. Switches certified for 60VDC max when wired in the following manner\*



\* Not polarity sensitive

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